



2016  
**Major Automated Information System  
Annual Report**



**Department of Defense Healthcare Management System  
Modernization (DHMSM)**

Defense Acquisition Management  
Information Retrieval  
(DAMIR)

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## Common Acronyms and Abbreviations for MAIS Programs

Acq O&M - Acquisition-Related Operations and Maintenance  
ADM - Acquisition Decision Memorandum  
AoA - Analysis of Alternatives  
ATO - Authority To Operate  
APB - Acquisition Program Baseline  
BY - Base Year  
CAE - Component Acquisition Executive  
CDD - Capability Development Document  
CPD - Capability Production Document  
DAE - Defense Acquisition Executive  
DoD - Department of Defense  
DoDAF - DoD Architecture Framework  
FD - Full Deployment  
FDD - Full Deployment Decision  
FY - Fiscal Year  
IA - Information Assurance  
IA TO - Interim Authority to Operate  
ICD - Initial Capability Document  
IEA - Information Enterprise Architecture  
IOC - Initial Operational Capability  
IP - Internet Protocol  
IT - Information Technology  
KPP - Key Performance Parameter  
\$M - Millions of Dollars  
MAIS - Major Automated Information System  
MAIS OE - MAIS Original Estimate  
MAR - MAIS Annual Report  
MDA - Milestone Decision Authority  
MDD - Materiel Development Decision  
MILCON - Military Construction  
MS - Milestone  
N/A - Not Applicable  
O&S - Operating and Support  
OSD - Office of the Secretary of Defense  
PB - President's Budget  
RDT&E - Research, Development, Test, and Evaluation  
SAE - Service Acquisition Executive  
TBD - To Be Determined  
TY - Then Year  
U.S.C - United States Code  
USD(AT&L) - Under Secretary of Defense for Acquisition, Technology, & Logistics

## Program Information

### Program Name

Department of Defense Healthcare Management System Modernization (DHMSM)

### DoD Component

DoD

The acquiring DoD Component is Program Executive Office (PEO) Department of Defense (DoD) Healthcare Management Systems (DHMS) for Defense Health Agency (DHA).

## Responsible Office

### Program Manager

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## References

### MAIS Original Estimate

This investment does not have an approved program baseline; therefore, no Original Estimate has been established.

## Program Description

Department of Defense (DoD) Healthcare Management System Modernization (DHMSM) is a tailored Major Automated Information System (MAIS) program established to acquire and field a configurable and scalable modernized Electronic Health Record (EHR) System. DHMSM will focus on the replacement of DoD legacy healthcare systems including, but not limited to, Armed Forces Health Longitudinal Technology Application (AHLTA), Composite Health Care System (CHCS) (inpatient), and most components of the Theater Medical Information Program-Joint (TMIP-J) program, with an Off-The-Shelf (OTS) EHR System. DHMSM will address the current state of the Military Health System (MHS), where multiple healthcare legacy systems and data stores, developed over decades, are in need of modernization to ensure and enable sustainability, flexibility, and interoperability, for improved continuity of care.

The DHMSM program acquired an integrated inpatient/outpatient Best of Suite (BoS) EHR solution, augmented by Best of Breed (BoB) product(s). BoS refers to an integrated inpatient and outpatient EHR System with software components that, to the maximum extent practical, allow for an integrated, maintained, and deployed system with a design architecture that allows for access to and sharing of common data, common user interfaces, common workflows, and common business rules. Furthermore, a BoS will support end-to-end related healthcare and business operations. BoB is defined as a solution or module not part of the BoS, which would require engineering and integration efforts in order to be integrated with the BoS. When implemented, the EHR System will provide access to authoritative sources of clinical data to enable improved population health, patient safety, and quality of care. The solution will support an enhanced patient care experience and serve as a tool to maximize medical readiness for our military.

The modernized EHR System will unify and increase accessibility of integrated, evidenced-based healthcare delivery and decision-making. The DHMSM program will collaborate with the DoD/Department of Veterans Affairs (VA) Interagency Program Office (IPO) and the Defense Medical Information Exchange (DMIX) program to ensure compatibility and interoperability with the standardized healthcare data framework and exchange standards, promulgated by the Office of the National Coordinator for Health Information Technology (ONC), as they evolve and become available. DHMSM supports the availability of longitudinal health records for over 9.6 million DoD beneficiaries and over 153,000 MHS personnel globally, and to the full range of military operations to DoD practitioners wherever and whenever needed. The application of standardized workflows, integrated healthcare delivery, and data standards will enable improved electronic exchange of health and patient data between the DoD and its external partners, including the VA and other Federal and private sector healthcare providers.

The DHMSM program established two segments to support deployment of the EHR System to the MHS enterprise, serving all Active Duty, Reserve, Guard, and beneficiaries. Fixed Facilities (Segment 1) will deploy the EHR System to all medical and dental permanent fixed facilities worldwide, inclusive of approximately 55 (41 in Continental United States (CONUS)) Inpatient Hospitals and Medical Centers, 361 (292 in CONUS) Ambulatory Care Clinics, and 249 (194 in CONUS) Dental Clinics. Operational Medicine (Segment 2) will work with the Joint Operational Medicine Information Systems (JOMIS) Program Office, and the Services' infrastructure program offices, to deploy the EHR System to permanent and temporary operational environment platforms to meet capabilities required for each Role of Care, as defined in Joint Publication 4-02 Health Service Support. Operational platforms currently include 225 ships, 75 submarines, and two hospital ships; temporarily deployed operational medical units currently include approximately six Theater Hospitals, 450+ Forward Resuscitative Sites, three Aeromedical Staging Facilities (ASF), and numerous aeromedical evacuation teams to support military operations abroad.

Maintaining complete and accurate medical records is an essential part of patient care management. Practitioners need access to patients' longitudinal health records to ensure that relevant data is accessible for decisions and in support of clinical management. The DoD has multiple legacy healthcare systems and data stores, developed over decades, which need to be modernized to ensure and enable sustainability, flexibility, and interoperability, and to improve the continuity of care. Supported by a proper determination and findings, the Government released a solicitation for a single-award, Indefinite Delivery, Indefinite Quantity (IDIQ) contract for a single contractor the scope of which included the purchase of an OTS solution, integration activities, and deployment support across the DoD enterprise to satisfy the full set of requirements. Following the DoD/VA IPO's technical architecture requirements and data exchange guidance, the Contractor will, to the maximum extent practical, leverage data exchange infrastructure provided by the DMIX program for standardized health

data interoperability with VA and Federal and other private sector providers.

The Under Secretary of Defense for Acquisition, Technology, and Logistics (USD(AT&L)), as the Milestone Decision Authority (MDA), is the approval authority for all ATPs. A DoD EHR Senior Stakeholder Group (SSG) will review and make recommendations to the MDA for ATP decisions. The SSG consists of executive participants from USD(AT&L), Deputy Chief Management Office (DCMO), DoD Chief Information Office (CIO), Assistant Secretary of Defense for Health Affairs (ASD(HA)), Service Surgeons General (SGs), Joint Staff J8, Office of the Secretary of Defense (OSD) Cost Assessment and Program Evaluation (CAPE), OSD Comptroller, DoD/VA IPO, Program Executive Office (PEO) Defense Healthcare Management Systems (DHMS), and the DHMSM program office.

## Business Case

**Business Case Analysis, including the Analysis of Alternatives:** The DoD medical mission, executed by the MHS, is designed to provide a continuum of health services across the full range of military operations to create and sustain a healthy, fit, and protected force, and care for ill and injured warriors. Specifically, the MHS desires an EHR and health information exchange (HIE) that facilitates an evolving integrated healthcare delivery network and grows stronger partnerships with the Department of Veterans Affairs (VA) and healthcare partners in the civilian sector, both national and international. As such, all partners in the healthcare delivery network must have access to longitudinal health records with relevant and accurate information, including semantically standardized and computable data elements and clinical decision support that are presented in meaningful ways to support clinical management of patients and populations.

DoD provides and maintains readiness for medical services and support to: members of the Armed Forces across the full range of military operations; their family members; those held in the control of the Armed Forces; and others entitled to or eligible for DoD medical care and benefits in military treatment facilities and under the TRICARE Program. The MHS supports the operational mission by fostering, protecting, sustaining, and restoring health. The following approved documents provide the foundation for DHMSM requirements:

- The Health Readiness Concept of Operations, January 21, 2010;
- The Health Service Delivery Concept of Operations, February 22, 2011;
- The Health System Support Concept of Operations, February 22, 2011;
- The Force Health Protection Concept of Operations, November 17, 2011; and
- Joint Publication 4-02, Health Service Support, July 26, 2012.

The Analysis of Alternatives (AoA) was conducted in three phases. The Phase III analysis, conducted by the Office of Cost Assessment and Program Evaluation between February 2013 and March 2013, resulted in the decision to acquire a replacement for the DoD legacy healthcare systems, including but not limited to, AHLTA, CHCS, and the EHR component of TMIP-J. This analysis also informed the June 21, 2013 SECDEF memorandum mandating that the DoD pursue the purchase of a competitive solution to meet the business need for an EHR System. The Phase III analysis validated that commercial EHR alternatives could offer reduced cost, schedule, and technical risks, and access to an increased current capability with the possibility of future growth of capabilities by leveraging ongoing advances in the commercial marketplace.

**Firm, Fixed-Price Feasibility:** The determination of contract type will be based on risks associated with the estimated cost of satisfying the requirement, not lack of clarity of the technical requirement. When making the selection of contract type to execute the program's next acquisition phase, the MDA will choose between fixed-price and cost-type contracts consistent with the level of cost and technical risk associated with the effort.

**Independent Cost Estimate:** The program has not experienced a Critical Change which would induce the independent cost estimate required by 10 U.S.C. 2334(a)(6).

**Certification of Business Case Alignment; Explanation:** A business case for DHMSM is in development but not yet finalized, thus it is premature to certify that the technical and business requirements have been reviewed and validated to ensure alignment with the business case.

## Program Status

**No Baseline:** This Automated Information System Investment has not yet been baselined. The information provided herein is appropriate for the current status of the program. No Original Estimate is being established by this report.

On June 21, 2013, the MDA directed DHMSM, a highly tailored MAIS program, to focus on the replacement of DoD legacy healthcare systems.

On January 2, 2014, the MDA directed Program Executive Office, DoD Healthcare Management Systems to transition all relevant clinical application requirements and planning for DoD from integrated Electronic Health Record - Increment 2 to the DHMSM program and to be included in the DHMSM baseline.

The MDA approved the ATP for release of the DHMSM Request for Proposal on August 22, 2014 and approved the ATP for Contract Award on July 17, 2015. The DHMSM program's next MDA decision point is Limited Fielding for Initial Operating Capability, expected in fourth quarter of FY 2016.

## Schedule

This investment does not have an approved program baseline. Therefore, the information provided here does not constitute an Original Estimate.

## Performance

This investment does not have an approved program baseline. Therefore, the information provided here does not constitute an Original Estimate.

No Key Performance Parameters have been approved for DHMSM.

## Funding

This investment does not have an approved program baseline. Therefore, the information provided here does not constitute an Original Estimate. The following funding data is extracted from the FY 2017 President's Budget documentation.

DHMSM				
Fiscal Year	RDT&E (TY \$M)	Procurement (TY \$M)	MILCON (TY \$M)	Acq O&M (TY \$M)
2016	396.2	0.0	0.0	23.4
2017	298.6	29.5	0.0	50.7
2018	42.5	499.2	0.0	73.0
2019	10.3	547.2	0.0	76.4

1) The ACQ O&M reported in the table above does not include \$423.8M of O&M for Operations & Sustainment across the Future Years Defense Program (FYDP) represented above (FY16 - FY19).

2) DHMSM FY16 funding does not include \$67.1M that is being reprogrammed.